DOCUMENT RESUME

ED 173 520 UD 019 628

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TITLE The Dutch Social Employment Program. Reprint 319.
INSTITUTION Wisconsin Univ., Madison. Inst. for Research on Poverty.
PUB DATE 78
NOTE 40p.; Not available in paper copy due to small print

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Cost Effectiveness; *Disadvantaged Groups; Employment Opportunities; *Employment Programs; Handicapped; Program Administration; Program Coordination; *Program Costs; *Program Effectiveness; Program Evaluation; Public Policy
IDENTIFIERS *Netherlands

ABSTRACT

The performance of the Social Employment Program (a public undertaking to employ physically, socially, or culturally disadvantaged persons) in the Netherlands is discussed and evaluated in this paper. The management, organization, and financial structure of the program are described in detail, and the degree of efficiency attained by the program is analyzed in terms of social as well as economic costs and benefits. Lessons of the Dutch experience in providing income for disadvantaged persons are related to current discussions in the United States on that issue. Appendices provide calculations of training and increased productivity benefits, and costs of displaced private sector employment. A comment by Victor Halberstadt on the research presented in this paper is also included. (EB)

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OCT 10 1979

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THE DUTCH SOCIAL EMPLOYMENT PROGRAM

Robert H. Haveman

UD 019628

Reprint 319

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THE DUTCH SOCIAL EMPLOYMENT PROGRAM

Robert H. Haveman

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Robert H. Haveman

The Dutch Social Employment Program

The number of people in the United States who desire to earn income through working, whose productivity is very low, is substantial. This population includes a high proportion of persons classified as disabled or handicapped. It also includes persons with serious social or cultural disadvantages—a language barrier, low educational attainment, a background of alcoholism or drug use, a criminal record, or a lack of job skills. Irrespective of the source of their problems, all of these people can be described by the term *less productive workers.*[1]

Public policy has focused an enormous volume of resources on these workers during the last decade. Education, training, and rehabilitation programs have been instituted and have grown to substantial size. Public transfer programs have assisted them and their families, while simultaneously reducing the incentive for them to seek work. As skepticism

Helpful comments on a draft of this paper were received from Edward M. Gramlich, Victor Halberstadt, Peter Kemper, Jonathan R. Kesselman, J. M. Kwant, Stanley H. Masters, Philip Moss, and Ernst W. Stromsdorfer. Research support from the Netherlands Ministry of Social Affairs, the Institute for Research on Poverty, the Brookings Institution, and the Netherlands Institute for Advanced Study is gratefully acknowledged.

1. The terms *handicapped, disabled,* and *disadvantaged* are separable in concept but overlap significantly in practice. Handicaps and disabilities typically refer to physical or mental conditions that limit either the extent or the type of activity in which a person can engage. They are often categorized as total, partial, or vocational. Persons with partial disabilities are often restricted in the extent or duration of the activities in which they can engage; vocationally disabled persons are unable to carry on effectively in the occupation in which they were employed before becoming disabled. Persons in both categories often work. Disadvantaged workers are those whose activity is also limited by some personal characteristic (or some set of characteristics) other than a physical or mental problem—the combination of older age, illiteracy, and a low skill level would indicate a disadvantaged worker. In most cases, programs defined for the handicapped and disabled also provide benefits to some disadvantaged workers. In all three cases, low economic productivity is the primary characteristic.

regarding the effectiveness of these policies has grown, so has interest in publicly provided or subsidized employment programs for less productive workers. Discussions of such programs focus on guaranteed public jobs for low productivity workers as a complement to a reformed income support system, the extension of federal grants for state and local public employment as a countercyclical policy instrument, and greater public support for sheltered workshops or supported work.

Social policy toward handicapped, disabled, and disadvantaged workers varies widely among countries. Those adopting full employment policies—the Eastern European countries, for example—expect all individuals, including the handicapped and disabled, to contribute to the social product, and these countries make provision for such contribution via public enterprises, state-supported cooperatives, or home work. The social welfare states of Western Europe—for example, Sweden and the Netherlands—generally take the "right to work" concept as a fundamental principle and seek to provide employment for anyone who wishes to work. In the United States, many handicapped and disadvantaged persons are guaranteed some income support, but not employment. Yet through both the nonpublic, nonprofit sector (in efforts such as Goodwill Industries) and regular private or public employment many such persons do find employment.

In this paper, the structure and performance of the Social Employment program of the Netherlands is described and evaluated.[2] While such an analysis is important in its own right, it has special relevance to current policy discussions in the United States. In the first section of the paper, the organization and financial structure of the Dutch Social Employment program are described and major patterns of employment and cost growth are summarized. Analysis of the financial structure and growth patterns reveals adverse incentives and a lack of economic control. This discussion sets the stage for an analysis of the economic efficiency of the program. Using a benefit-cost framework, the industrial centers component of the Dutch program is analyzed in the second section. Both the methodological procedures and the empirical results of the study are described there. In the final section, some lessons of the Dutch experience in providing income support and employment for less productive workers are drawn and related to current U.S. policy discussions.

2. Most of the information and statistics on the Dutch Social Employment program are from Robert H. Haveman, "A Benefit-Cost and Policy Analysis of the Netherlands' Social Employment Program" (Leiden, Netherlands: University of Leiden, Mar. 1, 1977; processed).

The Social Employment Program

The Dutch Social Employment program is a large public undertaking; in 1976, 64,000 workers accounting for 1.5 percent of total employment in Holland worked in the program. Although public responsibility for providing employment for handicapped workers dates back to the 1800s in Holland, the present law dates only from 1969; it combines a program for manual workers and another for administrative workers that were begun as part of the reconstruction after World War II.

While the program that existed before the war was motivated by charity, the postwar program was seen as an integral part of national full employment policy. The Dutch took seriously the right-to-work mandate of the United Nations Universal Declaration of Human Rights.[3] In the postwar program, the employees of the program were given normal public employee status, brought under the provisions of the social insurance laws, and paid a wage that approximated that of regular private or public sector workers performing similar functions (though at substantially greater productivity levels).[4] Moreover, it was stipulated that the output they produced was to be sold at a market price, not less because of available government subsidies nor greater because of appeals to charity.

Management and Financial Structure

The Social Employment program is a complex undertaking by the national government and municipal governments that is defined by numerous complicated regulations. Since 1969 the program has had two primary components—an industrial centers program and an open-air and administrative activities program. The former is revenue-yielding, while the latter seldom produces a salable product or service. The output of the latter activities is typically a part of normal public service provi-

3. This declaration, put forth by the General Assembly in 1948, stated: "Everyone has the right to work, to free choice of employment, to just and favourable conditions of work, and to protection against unemployment" (art. 23), *Yearbook of the United Nations, 1948–49*, p. 536.

4. From 1950 to 1969 the wage was tied to unemployment compensation benefits and ranged from 105 percent to 140 percent of such benefits. In 1976 the entry-level wage ranged from two-thirds to 110 percent of the wage income of the worker in the modal family, depending on the skill level of the worker. In addition, within each of the ten skill levels, wages rose above the entry level by number of years in the program.

sion—the maintenance of sports fields, parks, and highway grounds, and maintenance and clerical work in libraries, museums, and public offices. In 1976, 60–65 percent of total program employment was concentrated in the one hundred and sixty factories that make up the industrial centers program.[5]

In the Social Employment Act of 1969 the national government accepted responsibility for providing employment for handicapped and other workers who cannot find work in the private or regular public sectors.[6] Responsibility for organizing, administering, and financing the program was assigned to the Ministry of Social Affairs. The task of actually providing employment was delegated to municipal governments, which must both recruit a work force from the eligible population and insure that an adequate volume of work is available. Municipalities may function alone or in concert with other municipalities, and they may operate their programs directly or assign responsibility to a special organization with its own quasi-legal status. The organizational unit for administering the program is called a *werkverband* in either case.[7] The municipality is subject to a comprehensive set of regulations regarding management and administrative procedures, accounting and reporting standards, control and oversight structures, the nature of the work provided and of the work place, the admission of employees, the assignment of workers to activities and to wage classes, and the procedures for marketing the product.

The law requires that each municipality or group establish a social employment commission to give advice on which proposed workers should be admitted to the program and on the structure and operation of the *werkverband*. The commission is composed of a member of the municipal council (chairman), three people proposed by the trade unions, and a representative of the national Ministry of Social Affairs. Other members can be added, including representatives of employer groups.[8]

5. In 1976 the average factory employed 225 workers, compared with 35 in 1955 and 108 in 1965.

6. The preamble of the act (Wet Sociale Werkvoorziening) states: "We have considered it desirable to provide regulations concerning the provision of adapted employment, aimed at conservation, restoration or stimulation of the working capacity, on behalf of persons, who are capable to work, but for whom, mainly due to factors connected to their person, employment under normal circumstances is not or not yet available."

7. *Werkverbanden* are responsible to the municipal council, the ruling body of the municipality.

8. As is emphasized later, the composition of this commission is important, given the structure of financial incentives in the program.

While the commission is defined as "advisory," it has substantial de facto influence on the operation of the program.

The actual management of a municipality's *werkverband* is assigned to a manager, who is responsible for all aspects of the program and is assisted by foremen, instructors, and administrative personnel. The government has issued a set of operating guidelines that must be followed by the *werkverband* manager. One important guideline is that the work activities must rehabilitate and improve the participants' working capacity. Another guideline is that the work must meet an economic or social need—it must not be "make work." Finally, the marketing of the output must be done in a professional, businesslike way, not based on appeals for charity, and must not interfere with other employment "in an irresponsible way." No mention is made of the desirability of covering operating costs with sales revenue.

To be eligible for the program, a nonaged person must be able to work but unable to find work under normal conditions because of personal circumstances.[9] This rather vague criterion is interpreted and applied by each municipality through the procedures adopted for the selection and admission of workers. While the municipality ultimately offers the employment contract to a worker, substantial control over admission is exercised by a permanent placement subcommittee of the social employment commission. The subcommittee's recommendation is made only after obtaining full education and employment records on a candidate, a rather complete set of medical and psychological tests, and the recommendation of medical and social work personnel who have examined the candidate.

Once admitted, a worker is placed in a work rehabilitation or a test and training center where, during a few weeks or months, an adapted work function is developed. After this time the worker is assigned a job and a wage group that depend on his skill and the responsibilities that he is judged to be capable of handling.[10]

Because workers are paid a wage that is approximately equivalent to that of their counterparts in the private sector despite the latter's higher productivity, and because many of the activities in the program do not

9. A worker must be judged capable of attaining a minimum of one-third of normal productivity in the adapted circumstances of the program (a limited number of persons not capable of attaining this minimum are admitted into the program).

10. Detailed guidelines and job descriptions for the ten wage groups to which assignments can be made have been issued by the Ministry of Social Affairs.

Table 1. Subsidy Categories in the Dutch Social Employment Program

Subsidy percentage	*Subsidy*
100	Presence, travel, and lodging expenses for members and invited experts of program committees and subcommittees
	Wages and social costs of workers engaged in projects carried out on behalf of the national government
	Wages and social costs of workers eligible for "Subsidy for Special Groups in Social Employment Decree" of September 30, 1968
90	Wages and social costs of workers in nonrevenue-yielding activities
75 or 90	Wages and social costs of workers in revenue-yielding activities
	Medical care costs
50	Salaries, honorariums, and social costs of persons preparing reports on candidates for placement and selection
	Salaries and other costs of managing personnel
	Necessary costs of schooling and educational activities for younger and older workers
	Expenses for compensation to workers and savings schemes of workers
80	*Werkverband* deficit accruing to the account of the municipality after accounting for other subsidies, sales revenue, and miscellaneous income

Source: Wet Sociale Werkvoorziening (Social Employment Act) of 1967, as amended.

yield revenue, public subsidization is necessary. The subsidy arrangement is complex. The public grant is not based on the total costs or deficit of a *werkverband*. Rather, rates of subsidization vary by both the category of cost and the nature of the activity (see table 1). While the worker wage costs in the revenue-yielding activities (primarily the industrial centers) are subsidized at a 75 percent rate, those in the nonrevenue-yielding activities have a subsidy rate of 90 percent. However, a supplemental subsidy can raise the rate for revenue-yielding activities to 90 percent.[11] The major categories of cost on which a subsidy is not paid are materials, equipment, supplies, and facilities. One final subsidy arrangement allows the Ministry of Interior Affairs to cover 80 percent of any remaining costs out of the municipal fund. This insures that a municipality will be liable for only a very small share of the total costs of the program.

11. The supplemental subsidy is paid by the minister of social affairs upon request of the municipality.

Finally, because workers who have exhausted unemployment benefits shift rather automatically into the disability benefits program, it and the Social Employment program are closely related. The disability transfer program provides benefits up to about 80 percent of normal earnings to workers (including the self-employed) who, for physical or psychological reasons, are declared to be eligible. Recently it has grown at a rate of about 20 percent a year and now supports a recipient population of 530,000—nearly 13 percent of the Dutch labor force.[12] It is generally conceded that the eligibility criteria for the program are not rigorously applied and that medical and psychological personnel do not have the capability to monitor the health status of recipients (as is required by law). Social Employment workers generally can transfer out of the employment program and into the cash disability program. Alternatively, if their wage income before disablement exceeded about 125 percent of their Social Employment wage, they can receive cash benefits from the disability program to supplement their wage.[13]

Growth in Employment and Costs

From 1955 to 1976 the number of workers employed in the Social Employment program grew from 8,800 to over 64,000, with major spurts of growth occurring from 1965 to 1969 (due largely to the admission of severely handicapped workers into the program in 1965) and from 1971

12. The incidence of personal characteristics defined as handicaps or disabilities is substantially greater in the Netherlands than in the United States. For disorders provable by a clinical test, the disability rates are comparable. However, Dutch rates for mental and musculoskeletal disorders are more than five times those of U.S. rates. John H. Miller, "Preliminary Report on Disability Insurance," attributes this to the generosity of the Dutch social security benefits. See *Reports of Consultants on Actuarial and Definitional Aspects of Social Security Disability Insurance*, Subcommittee on Social Security of the House Committee on Ways and Means, 94:2 (GPO, 1976), app. A, pp. 42–45.

13. Social Employment workers with relatively high predisability earnings are entitled to supplemental income (in addition to the program wage) under the disability program to assure them 90 percent of their previous income. In practice, however, workers have often received over 100 percent and up to 125 percent of their predisability earnings. Before August 1976 the supplementation was based on a "standard" Social Employment wage which was very low, and even workers whose wages were above the standard received supplemental benefits as if their wages were at the standard. A new standard wage arrangement, in effect since August 1976, reduces, but does not eliminate, the chance of a worker receiving more income (from the Social Employment and disability benefit programs) after than before his disablement.

to 1976 (due primarily to the recession and high unemployment rates).[14] In the latter period, employment grew from nearly 44,000 in 1970, to 50,000 in 1973, to more than 64,000 in 1976. In 1976, the program accounted for 1.5 percent of total Dutch employment, varying from 0.8 percent to 3.0 percent among the eleven provinces. The open-air and administrative components of the program, which employed less than 13,000 workers, or about 30 percent of the total, in 1970, accounted for 35 percent by 1973 and 42 percent, or nearly 24,000 workers, by 1975.

Total program revenues, which approximate total costs, grew from 660 million guilders ($264 million, at 2.50 guilders per dollar) in 1970 to over 1,700 million guilders ($680 million) in 1975. Meantime the subsidy provided by the national government grew from 460 million guilders ($184 million) to 1,270 million guilders ($508 million). Sales revenue grew from 168 million guilders ($66.4 million) to 362 million guilders ($144.8 million) in the 1970–75 period.

In 1970, revenue from the sale of output accounted for about one-third of the total revenue of the industrial centers; 65 percent came from the national government subsidies and 2 percent from municipal subsidies. Sales revenue as a proportion of the total fell continuously during the six years, and by 1975 it accounted for only 27 percent of total revenue. With the relative share of the municipal subsidy constant, the national share rose to nearly 70 percent in 1975. The net result, then, was a significant shift in the burden of costs to the national government

In the open-air and administrative projects component of the program, sales revenue rose from 4 percent in 1970 to 8 percent in 1972, remaining at 8 percent through 1975. During this period, however, the contribution of municipalities to program costs fell from 8 percent to 5 percent. The share of the budget covered by the national government subsidy fell from a high of 89 percent in 1971 to 84 percent in 1972, but by 1975 had risen to 87 percent.

Because the growth of the costs of the programs has exceeded the growth of employment in the industrial centers, the total cost per worker has risen rapidly over the period: in 1970 it stood at 16,000 guilders ($6,400); by 1975 it had more than doubled, totaling 36,000 guilders ($14,400). The change in the sources of revenue caused an even more radical shift in the public subsidy per worker. Whereas in 1970 taxpayers were contributing about 10,000 guilders ($4,000) in subsidy for each

14. Much of the material in this section is from Haveman, "Benefit-Cost and Policy Analysis," table 2, p. 53.

worker employed, by 1975 the contribution was nearly 26,000 guilders ($10,400). This per worker figure is about one-third more than the national minimum wage and about 110 percent of the wage income of the modal worker.

While costs per worker have also increased in the open-air and administrative centers, both the absolute level and the growth have been less than in the industrial centers. Total costs per worker stood at about 13,000 guilders in 1970 and had risen to nearly 21,000 guilders in 1975. This 1975 figure is only about 60 percent of per worker costs in the industrial centers. Clearly, this is to be expected as the costs for raw materials and supervision in the industrial centers are greater.

What is not expected, however, is the contrast in pattern of growth in the subsidy per worker in the two kinds of centers. This subsidy stood at 11,000 guilders in 1970 for the open-air and administrative projects, or 107 percent of that in the industrial centers. By 1975, the subsidy in the open-air and administrative projects had risen to over 19,000 guilders. While this growth is, in itself, significant, it is nothing like the more than doubling in the per worker subsidy in the industrial center segment of the program. By 1975, the subsidy for the administrative projects stood at only 75 percent of that in the industrial centers.

These substantial increases in the taxpayer subsidy per worker stand as the most striking aspect of the data on employment and revenue. While the causes of this increase cannot be identified with precision, the most important ones probably are: the significant increase in the minimum wage over the period; the rapid increase in social security taxes for employed workers that have had to be covered by the program; the failure of sales revenue to grow as rapidly as program costs; and the increase in raw material and supervisory personnel costs due to the general inflation. The patterns of real program growth can be observed in the comparison of program financial indicators and relevant variables in the economy as a whole in table 2. As the table indicates, the growth in the program was substantially greater than the growth in the Dutch economy over the 1970–75 period. As a result, the economic burden of the program increased—by 1976 the program's budget was over 1 percent of net national product. Indeed, by 1975 it took all of the gross wage income in a modal family plus 10 percent of such wage income in a second family to support the subsidy for one industrial center worker. This increasing burden is attributable primarily to the rapid growth in per worker costs and subsidies in the industrial centers component of the program.

Table 2. Growth in Indicators of Dutch Social Employment Program Relative to Growth in Selected Dutch Aggregate Economic Indicators, 1970–75

Year	*Cost as a percentage of net national product*		*Subsidy as a percentage of labor cost per private-sector worker*		*Subsidy as a percentage of modal family wage income*	
	Total program	*Total governmental subsidy*	*Industrial center worker*	*Administrative and open-air center worker*	*Industrial center worker*	*Administrative and open-air center worker*
1970	0.62	0.46	67.2	72.0	83.1	89.0
1971	0.65	0.48	74.2	63.9	90.0	77.6
1972	0.68	0.50	78.1	71.2	96.5	88.1
1973	0.73	0.55	77.8	80.1	99.4	102.2
1974	0.83	0.62	82.0	70.1	108.6	93.5
1975	0.92	0.71	86.3	65.1	109.1	82.4

Source: Robert H. Haveman, "A Benefit-Cost and Policy Analysis of the Netherlands' Social Employment Program" (Leiden, Netherlands: University of Leiden, Mar. 1, 1977, processed), table 5, p. 62.

Program Structure and Performance

It is clear that a complex set of organizations and individuals interact within an equally complex set of regulations and subsidy provisions to determine the performance of the Social Employment program. The following conclusions regarding the effect of the program's structure on its performance are based on analysis of the provisions of the law, data regarding program operation, and discussions with individuals involved with the program at all levels.

1. The managers of the *werkverbanden,* municipal officials, and members of the social employment commissions see the provision of work to people admitted to the program to be the overriding objective. The coverage of costs by sales revenue is not considered an important objective. Hence, the structure of the program provides only weak incentives either to increase sales or to economize on costs.

From the manager's point of view, any operating deficit is passed on to the municipality, which in turn passes on the vast bulk of the deficit to the national government. Indeed, except under unique circumstances, no municipality has to cover more than 2 percent of worker wage costs out of its own budget. For this reason, neither *werkverband* managers nor other officials perceive a penalty if the program deficit increases, or reward

if the deficit is reduced. Similarly, there is no reward for reducing costs or increasing sales revenue and no penalty if costs drift up or sales revenue falls off.

The lack of incentives for cost reduction or sales increase is reinforced by the composition of the social employment commissions. Representatives of industry organizations and trade unions typically hold positions on these committees. Both groups tend to see Social Employment program sales as a threat to their own interests and are not likely to be strong proponents of efforts to increase them.[15]

2. Because of the large subsidy to administrative and open-air workers, the open-ended and undefined nature of the tasks that can be performed, and the lack of effective control of the growth of these components of the program, municipal governments are able to transfer the budget costs of activities serving the municipality from the municipal budget to the national budget.

Through the Social Employment program and the municipal fund of the Ministry of Interior Affairs, the national government covers 98 percent of the costs of administrative and open-air Social Employment workers. These workers can be assigned to numerous jobs that have traditionally been the responsibility of municipal governments (the operation of swimming pools, museums, and municipal offices, and open-air activities in maintaining parks, sports fields, or municipal grounds). As a result, municipal officials often find it in their interest to expand these components of the program, thus shifting costs onto the national budget. The national government has very limited control over this.

3. The relaxation of eligibility criteria, the rapidly rising benefit levels, and the rapid growth of the disability program have diminished both the referrals of people in the disability program to the Social Employment program and the financial incentive for people in the disability program to accept work. They have also led to a relaxation of eligibility criteria in the Social Employment program.

There is evidence that the program is increasingly serving workers who have difficulty in securing regular employment because of low skill,

15. One aspect of the incentive structure should be noted, however. While the average burden of costs borne by the municipality is very low, the marginal burden of increases in the deficit (whether due to cost increases or sales revenue decreases) rises from zero to 20 percent once the center's deficit (defined as total costs less the sum of the basic subsidy, the special subsidy, sales revenue, and miscellaneous income) goes above zero. The marginal burden of increases in costs varies among the types of costs.

age, or some other personal characteristic, rather than a readily distinguishable handicap. For example, while the program maintains a comprehensive, fifteen-category classification of the types of handicap of workers in the program "not elsewhere classified" is a large and rapidly growing category. In 1971, 10 percent of Social Employment workers were in this category; by 1975, nearly 15 percent were. From 1971 to 1975 the number of individuals in the category grew from 4,600 to 8,200; over 30 percent of the workers in the administrative component of the program are so classified. Using reasonable assumptions regarding the composition of the workers leaving this program component, it appears that about 50 percent of all workers entering the administrative component of the program in recent years have been placed in the "not elsewhere classified" category.

4. The provision of income (wages plus disability benefits) to Social Employment workers equal to at least 90 percent of previous income levels and the rapid growth in this income in recent years have reduced the flow of workers from the Social Employment program to open industry or regular public sector employment.

A Social Employment worker views his potential salary in open industry as little, if any, above the minimum wage. This wage would typically be below—and in some cases, substantially below—his combined income from the Social Employment and disability programs. There is little incentive for such a worker to attempt a transition since there is strain involved and little economic reward. Similarly, because of rapidly rising disability benefits, a worker not inclined to work may experience little penalty in moving from the Social Employment program to the disability program. No work is required in the latter program and little financial sacrifice may be involved, especially for workers whose Social Employment wage is not already supplemented by disability benefits. The decrease in the flow of Social Employment workers to alternative employment is one of the most notable trends in the program. While 3,400 workers (8 percent of the total) made the transition in 1969, only 1,000 (1.6 percent of the total) did so in 1975. In addition to the small financial incentive for workers to seek normal private or public employment, the slack economy during this period explains some of the trend.

5. While the national government has responsibility for providing financial subsidies to the Social Employment program and for setting standards and organizational requirements, it is able to exercise little financial and economic control over either the growth of employment in the program, or the financial costs of the program.

In a very real sense, the national government is simply in the position of paying bills submitted by organizations (municipalities, and through them, *werkverbanden*) irrespective of social costs or taxpayer burden. The instruments of national government control consist of policy statements and advice by the minister of social affairs, examination and evaluation reports on *werkverband* operation submitted by government evaluation teams (whose reports can lead to denial of the supplemental subsidy), stipulation of budget goals and the communication of them to municipalities, revision of operation and admission criteria so as to constrain decisions of municipalities and *werkverbanden*, presence of government representatives on some of the municipality governing bodies, and annual statistical reports required of *werkverbanden* on costs, revenues, employment, and structure. Although the effectiveness of these instruments is difficult to assess, both the nature of the instruments and conversation with those subject to and administering them suggest a serious lack of program control by the national government.

In sum, the existing program structure is not designed to encourage effective economic performance in the operation of the program. The national government (and, through it, taxpayers) pays the bill, while municipal governments and *werkverbanden* make operating decisions. Program managers or municipal officials have little incentive to control costs or to increase revenues. There is little effective accountability of municipal officials and program managers to the national government. And program managers, through the manipulation of the program, can shift the burden of traditional municipal costs onto the national government. Moreover, there is little incentive for Social Employment workers to move from the program to employment in open industry.

A Benefit-Cost Analysis of the Program

Public employment programs have characteristics similar to those of many other public activities. They use real resources of society—labor, materials, facilities, machines—and they produce outputs that are presumably of benefit to society. These benefits are wide-ranging and include the products produced in the program, the increase in productivity of the participants in the program, and the increase in the psychological well-being of the participants and their families. As a consequence, the standard techniques for evaluating the worth of public programs in general are also applicable to public employment programs.

The analytical framework of benefit-cost analysis measures all of the benefits produced by a public undertaking and all of the costs the program creates. If the benefits exceed the costs, the project is judged a worthwhile social undertaking (although it may have to compete with alternatives for scarce public funds); if there are net costs that cannot be eliminated either by increasing the benefits or decreasing the costs, the continuation of the program should be questioned.

However, some programs that fail to yield net benefits may be direct substitutes for activities that also have net costs. It may well be that if the Social Employment program did not exist, participants in that program would be eligible for full disability program benefits. While this latter program is an income transfer program, its structure and high benefit levels suggest that it may lead to reductions in work effort and, as a result, it may generate net economic costs. If this program and its structure are assumed not to be subject to change, society might gain if the participant remained in the Social Employment program, even though it was evaluated to have net costs. Only if the net cost of participating in the Social Employment program exceeded that for which it substitutes should continuation of the Social Employment program be questioned. (Unfortunately, no estimates of reductions in labor supply or other efficiency effects of the disability benefits program are available to enable a comparison.)

This discussion neglects the equity or distributional effects of the program. For most social programs, income redistribution is an important objective. Since the Social Employment program and its fixed substitute, the disability benefits program, assist individuals with similar types of problems and of labor-market opportunities, it is unnecessary to include the income redistribution effects of Social Employment in the analysis.

In estimating the economic costs of a program for the purpose of a benefit-cost evaluation, only those effects that actually displace or preclude society's resources from other uses are included in the calculations. Hence, the cost of supervisory personnel is taken to be their productivity if they were employed elsewhere in the economy; it is measured by the wage they are paid. However, the forgone output from employing program participants who would otherwise be unemployed is zero—and the wages paid to them are treated as a transfer of income and not as a real cost. Similarly, outputs are valued by the willingness of buyers to pay for them. This is reflected in the price of the outputs if they are sold in a

competitive and well-functioning market. (If willingness to pay prices is accepted, it should be noted, the underlying distribution of income that determines these prices is accepted; economic efficiency is again emphasized.) Within this framework, an employment program like the Social Employment program will have net social benefits only if it can use productive resources valued at a given amount and produce various outcomes whose value exceeds that amount.[16]

Calculating Benefits and Costs

The categories of benefits and costs for the Social Employment program, the nature of welfare gains and losses in each category, and the procedures for estimating each gain or loss in an ideal benefit-cost analysis are presented below.[17] Estimates of partial net benefits are calculated for 1973.

SOCIAL BENEFITS. The outputs produced by the Social Employment program are many and varied. Some are material in nature—the production of furniture, for example—while others are services, such as the keeping of financial records.

If the economy is an effectively competitive economy, and if the outputs of the centers are sold on the open market or arranged by competitive bids, the price at which the outputs are sold is an accurate reflection of

16. This discussion presumes that the project should be evaluated from society's point of view. However, benefits and costs could be calculated from the point of view of taxpayers. Interest would center on direct expenditures and receipts in the public sector rather than on full economic benefits and costs. That this is different from the perspective of society as a whole can be seen by considering wage payments to otherwise unemployed program participants. From society's point of view, such payments entail no costs at all—income is simply transferred from one member of society to another. From the taxpayers' point of view, however, such payments are a cost—they result in an increase in tax liability.

From the point of view of participants in the program, their benefits must compare favorably with the costs of their involvement in the program, if there is no coercion to participate in the program. There is coercion, however, to participate in many manpower programs.

17. This discussion presumes that reasonably competitive markets prevail and that monopoly, externalities, and other market imperfections are not serious. Modifications to this framework that are required in the presence of these problems are described in the paper by Kemper and Moss in this volume. See also Bent Andersen, *Work or Support: An Economic and Social Analysis of Substitute Permanent Employment* (Paris: Organisation for Economic Co-operation and Development, 1966).

their social value per unit. However, if the economy is not competitive, or if the outputs are sold under special noncompetitive arrangements, a shadow price must be calculated. This price would seek to reflect the willingness of the purchasers of the output to pay for it. In concept, this willingness to pay is an accurate measure of the real social benefit of the output V.

Data on the sales revenue of each of the industrial centers for 1973 are taken as a good estimate of the value of V.[18] Because the output produced by these centers is sold via a contract with a private sector business or a governmental unit or on the open market, it is likely that the output is sold at a competitive price. This is especially true if the contracts are obtained through a competitive bidding process, as is often the case.

The increased productivity of participants, because of both explicit training activities within the Social Employment program and simply the effect of being in a work setting and engaging in work activities, has characteristics of an investment. Once the increase in productivity is attained, it is likely to persist at some level into the future. This future value for any given social employment worker can be reflected, at least in concept, by calculating the increase in a participant's economic productivity in future years attributable to the program, and discounting this stream back to the present, using an appropriate discount rate. This present value of increased productivity is labeled P.

No reliable estimates of the value of the training are available. There is some weak evidence that the gain in productivity from participating in the program is not substantial, however—the very low, and falling, number of participants who make the transition from the program to private or normal public sector employment. Therefore this variable is assigned a lower-bound estimate of zero. On the basis of rough estimates of worker progress through the wage groups of the program and an assumed duration for which this productivity effect persists (see appendix A), a positive, upper-bound estimate is also assigned to this variable.

The well-being or satisfaction that a worker experiences by being a

18. Sales revenue data may be biased upward because buyers of output are willing to pay a premium over the market price in order to aid handicapped workers. They may be biased downward, however, because the subsidized labor cost of the centers allows them to enter bids on contracts that are below the effective market price of the product or service. Since the magnitude of these biases is unknown, sales are assumed to be a reliable estimate of V. It is judged that, if anything, this estimate is biased downward to some extent.

participant in the program and that results in increased productivity is reflected in productivity improvements. There may be additional gains in well-being stemming from the pleasure of contributing to an ongoing productive process or the social interactions with other workers. This category of social-psychological well-being benefit W is assumed to be unmeasurable.

Another unmeasurable category is the reduction in real social costs or increases in social output that might result because of the improved social-psychological well-being of the worker. Reductions in hospital, doctor, or institutional care costs attributable to the improved psychological well-being of the worker could benefit taxpayers, the worker's family, or the worker himself, depending on who would bear the costs of this treatment if it were required. The value of this benefit M would, in concept, be equal to the cost of the care provided to the worker if he were *not* in the program minus the cost of the care provided the worker when he is in the program—for example, the value of the increased work activity of close relatives of the handicapped person who would be able to hold a job if the person were employed.

An even more distant benefit could be called a third-party or external benefit. Citizens generally might experience satisfaction simply by knowing that their community (or nation) was undertaking a program to aid handicapped or low-skilled workers. This benefit T is equal to the willingness of citizens to pay for the satisfaction that they are experiencing, even if they do not have to pay for it. Again, for any given worker, it would persist only as long as the worker was participating in the program. This benefit also is assumed to be unmeasurable.

SOCIAL COSTS. The output O that is forgone by society because a worker is participating in the program, and not doing something else, can be measured by the wage income that would be earned by the worker if he were not participating in the program, presuming he would be paid the market value for his work. For example, if a person might be, say, keeping the books of a local small business if he were not participating in the program, this output would be lost to society.

In the absence of an experimental design, it is impossible to estimate what participants would be doing if they were not in the program. Some of them would undoubtedly be doing nothing in the way of productive work. Others would be engaging in some part-time free-lance productive activities, for which they might or might not receive remuneration. Still others would be employed in private industry. However, the low and

falling number of program participants that transfer from the program to private employment suggests that their options are considerably less attractive than the program. In this analysis the lower bound of the true value of output forgone is assumed to be zero. For the upper bound, workers are assumed to have engaged in activities that would have yielded them income equal to 30 percent of their wage costs in the program.[19]

The operation of the program uses other scarce resources that could be employed in alternative ways. These program operating costs R include the remuneration (including fringe benefits) of supervisory, administrative, and medical workers, materials and sales costs, machinery, building, and other facilities costs, worker transportation costs, the medical and physical training costs incurred on behalf of participants (to the extent that such costs are over and above the costs that would be incurred for participants if they were not working in the program), and other program costs to the extent that they represent the use of real resources in the program.[20] (The wages of program participants, including social insurance taxes, are treated as transfer payments.)

Data for 1973 on the total costs of each of the industrial centers, and the composition of these costs by sixteen categories, collected by the Ministry of Social Affairs are used as an estimate of operating costs R. Presuming that the inputs that these costs represent were purchased in competitive markets, these costs should be accurate reflections of the social costs that the use of these inputs implies.[21]

If the output of the Social Employment program displaces some output in the private sector or normal public sector, and if some of the resources

19. This value would be 40–50 percent of the earnings of the lowest paid workers in the private sector in Holland, allowing for spells of unemployment.

20. The costs of municipal officials, employment office officials, members of advisory committees, and employees of the ministry concerned with the program (whether or not these costs are reimbursed) would be included in this category.

21. If there is a bias present, it would be in the direction of understating costs. This judgment is based on what appear to be excessively low costs for facility rental and equipment depreciation for some of the centers—perhaps because buildings and equipment are owned by the municipalities and provided to the centers for a nominal charge, or because the centers own the buildings without mortgages and hence register no charge for them in their accounts. Because the services of the facilities or the machinery used represent a real economic input, they should be valued at the price they would bring if sold or rented on the open market. The estimates would also be biased downward because *no* costs are included for the time of municipal officials, members of advisory committees to the municipality and the ministry, members of the placement committee, and all of the employees of the ministry who are concerned with administration of the Social Employment program.

(primarily labor) thereby released are idle, the social cost D of the functioning of the Social Employment program equals the lost output due to the increased unemployment in other parts of the economy. Indeed, if the program output displaced an equivalent amount of private sector production and if none of the resources released by the private sector were reemployed, this cost would be equal to the value of program output V. In this case, the net value of the program output would be zero, and any real resources used in producing it would be wasted.[22] This component is extremely difficult to estimate. No direct data on it are available. The lower-bound estimate used here is zero, implying a fully employed economy in which all of the displaced resources are reemployed. The upper-bound estimate presumes that 70 percent of the displaced labor, and all of the other displaced factors of production, are reemployed (see appendix B).[23]

Estimates of Benefits and Costs

The social benefits B from one year's operation of the Social Employment program can be summarized as the value V of program output, plus the present value P of increased productivity of participants, plus the increase W in the social-psychological well-being of participants, plus the reduced medical or psychological care costs M stemming from their increased well-being, plus third-party benefits T stemming from the increased well-being. The social costs C of one year's operation are the value O of forgone participant output, plus the value R of program operating costs, including supervisory salary costs, material costs, machinery and facilities costs, and incremental training costs, plus the value D of forgone output from displacement of private-sector and normal public-sector resources not reemployed. The net social benefit N of the program is the difference between the social benefits B and social costs C.

If only those variables for which some estimate for 1973 is available are used, it is possible to calculate partial net benefits PN:

$$PN = (V + P) - (O + R + D).$$

22. Alternatively, this displacement effect could be treated as an offset to the value of program output and incorporated in the benefit side of the analysis, as Kemper and Moss do in their paper in this volume.

23. The upper-bound estimate was based on judgment. The only empirical support for it is found in Robert H. Haveman and John V. Krutilla, *Unemployment, Idle Capacity, and the Evaluation of Public Expenditures: National and Regional Analyses* (Johns Hopkins Press for Resources for the Future, 1968).

The resulting value of *PN* can be positive or negative; if it is negative, it represents net social costs.

If this calculated value of *PN* for the program or an individual center is, say, $-x$ guilders, the following statement can be made: Neglecting social-psychological well-being benefits, the Social Employment program (or industrial center *z*) imposes a net cost on society of *x* guilders. For the program (or a center) to be judged as contributing to net social welfare, the sum of benefits deriving from the increased social-psychological well-being of workers ($W + M + T$) must be greater than *x* guilders. If *PN* is positive, then the program (or center) is socially beneficial even if there are no social-psychological benefits. To the extent there are such benefits, the program's justification is that much stronger.

The most favorable evaluation of the program uses upper-bound values of all benefits and lower-bound values of all costs.[24] If a negative value results, it is a lower-bound estimate of the net social costs required to produce the unmeasurable social-psychological well-being benefits. The least favorable evaluation of the program uses lower-bound values of all benefits and upper-bound values of all costs.[25] If a negative value results, it is an upper-bound estimate of the net social costs required to produce the unmeasurable social-psychological well-being benefits. A third estimate uses only accounting values in the calculation and neglects all of those elements of benefit and cost for which no firm estimates are available.[26] It assumes, in effect, that *P*, *O*, and *D* equal zero—the lower-bound estimate of each.

From these procedures, the following estimates of partial net benefits or costs of the industrial centers component of the Social Employment program in 1973 are obtained:

Values used	*Net social cost (millions of guilders)*	*Cost per worker (guilders)*
Most favorable	65.1	2,365
Least favorable	273.7	9,950
Accounting only	107.2	3,896

24. The calculation can be stated as $PN = (V + 1{,}531 \text{ guilders}) - R$; *P* is 1,531 guilders (upper-bound estimate); *O* is zero (lower-bound estimate); *D* is zero (lower-bound estimate). The value of *P* is derived in appendix A.

25. The calculation can be stated as $PN = V - 0.3$ (wage costs per worker) + $R + 0.1$ (sales revenue per worker); *P* is zero (lower-bound estimate); *O* is 30 percent of wage costs per worker (upper-bound estimate); *D* is 10 percent of sales revenue per worker (upper-bound estimate).

26. The calculation can be stated as $PN = V - R$; *P*, *O*, and *D* are zero (lower-bound estimates).

Table 3. Distribution of 155 Industrial Centers by Partial Net Social Benefits or Costs per Worker, by Values Assigned to Benefits and Costs, 1973

Net social costs (−) or benefits (+) (guilders[a])	*Number of centers*		
	Most favorable values	*Least favorable values*	*Accounting values only*
−14,000 or less	1	11	2
−14,000 to −12,000	1	17	0
−12,000 to −10,000	0	41	4
−10,000 to −8,000	5	47	5
−8,000 to −6,000	8	31	22
−6,000 to −4,000	21	7	34
−4,000 to −3,000	19	1	22
−3,000 to −2,000	22	0	28
−2,000 to −1,000	29	0	15
−1,000 to 0	22	0	12
0 to +1,000	13	0	5
+1,000 to +2,000	6	0	5
+2,000 to +3,000	4	0	1
+3,000 to +4,000	3	0	0
+4,000 or more	1	0	0
Total	155	155	155

Source: Haveman, "A Benefit-Cost and Policy Analysis," p. 143.
a. Dollar comparisons can be made by using an exchange rate of 2.50 guilders per dollar.

At a minimum, then, the 1973 social costs of providing whatever social-psychological well-being benefits the Social Employment program might have yielded are 65 million guilders and could be as great as 274 million guilders. A reasonable middle estimate of 1973 social costs would be 125–150 million guilders. A medium estimate of partial net social costs per worker would be 5,000–6,000 guilders.

Given the increase in costs since 1973, combined with the lagging sales revenues for the program, partial net social costs per worker in 1977 are likely to be from 8,000 to 11,000 guilders. If this estimate of social costs per worker applied to both industrial center and open-air and administrative workers, the total social cost of the program in 1977 would be approximately 550 million to 700 million guilders.[27]

Because the centers have substantially different results in terms of sales and costs, the partial net social benefits (+) or costs (−) per worker are estimated for each center in table 3. Twenty-seven of the 155 centers yield a positive value for net social benefits when the most favorable values are accepted. This suggests that in those centers, social bene-

27. This is about 125–150 guilders per employed worker in the Netherlands.

fits are being produced over and above the social-psychological well-being benefits. None of the centers display positive values when the least favorable values are used, and the bulk of the centers have net social costs of from 6,000 guilders to 12,000 guilders per worker. The distribution of net social benefits or costs based on only accounting values is intermediate to the other two distributions, with eleven centers estimated to yield net social benefits.

Lessons for the United States

What lessons for public policy toward less productive workers in the United States does this evaluation of the Dutch Social Employment program have? In this section a few tentative suggestions are put forth. First, however, the broad outlines and trends of U.S. policy toward disabled persons are described. Discussion of policy targeted to the disadvantaged—antipoverty policy—is omitted because it has been described often and is generally well understood.[28] It consists of cash welfare (aid to families with dependent children and supplemental security income), in-kind transfers (food stamps and medicaid), and training and education. More recently, public service employment for those disadvantaged workers who are expected to work has been proposed as a component of welfare reform, and experimentation with supported work has been undertaken.[29] There is no program of public subsidization of sheltered workshops or direct employment of disadvantaged workers in effect, however. On the other hand, policy toward the disabled is generally not well understood. Increasingly, the group of persons assisted by disability policy includes workers who are classified as disadvantaged or poor.

Policy toward Disabled Persons

According to 1972 estimates, 15 percent of the adult, nonaged, noninstitutionalized population of the United States is classified as disabled.[30]

28. See Robert H. Haveman, ed., *A Decade of Federal Antipoverty Programs: Achievements, Failures, and Lessons* (Academic Press, 1977).

29. See the paper by Kemper and Moss in this volume for a description and discussion of the Supported Work demonstrations.

30. Much of the descriptive information in this section is from Sar A. Levitan and Robert Taggert, *Jobs for the Disabled* (Johns Hopkins University Press, 1977);

About one-third of these nearly 16 million people are so disabled that they cannot work at all, and another sixth cannot work regularly. These two groups are classified as "severely disabled." About two-thirds of the 10.3 million persons (about 7 million) who can work at least some amount do work either part or full time, usually in very low-paid positions.

Of the 8 million severely disabled persons, about 2 million were receiving income from the disability insurance program in 1972.[31] The median level of these benefits was about $2,100 per year. Since 1972 the number of program recipients has grown rapidly,[32] and by 1976, expenditures had reached more than $9 billion a year. In addition, disabled persons receive cash transfer benefits from about ten other federal programs and five state and local programs whose total benefits are about *four times* the expenditures of the disability insurance program.[33] They also receive medical assistance under medicare and medicaid, both of which target a substantial proportion of their benefits on the disabled,[34] and a number of Veterans Administration programs. In 1976, public expenditures on medical programs that aid the disabled totaled about $30 billion.

A number of programs for disabled persons are designed to improve their work capacity and to assist them in finding jobs. The most important of these is the joint federal-state vocational rehabilitation program. While

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unless otherwise noted statistics for 1972 related to the disabled are from Mordechai E. Lando and Aaron Krute, "Disability Insurance: Program Issues and Research," *Social Security Bulletin*, vol. 39 (October 1976), pp. 3–17.

31. About 50 percent of the severely disabled men who could not work at all received benefits.

32. From 1969 to 1975, the number of recipients in the disability insurance program rose from 2.5 million to 4.4 million, and expenditures from $2.5 billion to $8.4 billion.

33. These programs include the supplemental security income program, the black lung program, and the Veterans Administration disability compensation and pension programs.

34. In 1973, 85–90 percent of the expenditures in these two programs benefited the disabled; see Bureau of Economic Research, Rutgers University, *An Evaluation of the Structure and Functions of Disability Programs: Year I Summary Report* (Rutgers University, 1975). This report estimated that federal expenditures on the disabled were $40.7 billion, including $18.5 billion in cash benefits and $20 billion in medical payments; state and local expenditures $11.6 billion; and private expenditures (primarily insurance benefits) $30.8 billion in 1973, a total of $83 billion (ibid.). A similar tabulation for 1976 would undoubtedly total over $100 billion.

each state administers its own rehabilitation program, the federal government pays 80 percent of the costs, in addition to making grants for facilities and personnel training. In 1976 about 1.4 million persons were served by these agencies and about 450,000 of them were described as rehabilitated. Expenditures in this program exceed $1 billion a year.[35]

About 7 million handicapped people were employed in 1972. About 20 percent of them earned less than $50 a week. Many of these low earnings handicapped people—about 400,000—are employed in sheltered workshops, where the wage rates are, by and large, less than $1 an hour. The workshops are generally a part of the nonprofit-nonpublic sector and receive little in the way of government subsidies.[36]

In recent years the transfer programs—in particular, the disability insurance program—have both relaxed eligibility standards and increased benefit levels to a significant degree. These changes have contributed, in all likelihood, to the rapid growth in the number of recipients and the volume of expenditures. Because of these changes, assistance is now provided to less productive persons more generally, as opposed to those with clear handicaps or physical disabilities. It has been estimated that nearly one-half of eligibility determinations in the disability insurance program are now based on vocational considerations (age, occupation, and educational factors) and not on the medical severity of the disability —and that this proportion is rising.[37]

Work and the Less Productive Worker

The Dutch experience with Social Employment contains a number of warnings pertinent to U.S. discussion regarding publicly provided or subsidized employment programs for less productive workers.[38] The potential size and budget cost of employment programs for less productive work-

35. In addition, payments of up to 1.5 percent of total disability insurance benefits are available annually to provide rehabilitation services for recipients. In fiscal 1975 more than $80 million was so spent.

36. Some of these workshops—for example, some Goodwill Industries enterprises—do receive subsidies from the federal government's vocational rehabilitation program.

37. Lando and Krute, "Disability Insurance."

38. The U.S. policy debate will also bring increased attention to such issues as the statement, interpretation, and application of eligibility criteria, the monitoring of beneficiaries' continued need, the integration of transfer programs for less productive workers (the problem of multiple benefits), and the work incentives implicit in program benefit schedules.

ers in the United States is extremely large. If policies regarding the degree of leniency in applying eligibility criteria in either cash transfer or public employment programs are not carefully monitored and if wage levels established for public employment are not held below prevailing wage levels, program rolls and expenditures could mushroom. The population with some potential claim for benefits or jobs will be very large and could easily expand if vocational, cultural, or social factors, as opposed to medical or psychological considerations, are substantial factors in determining eligibility.

While the objective of providing a job to everyone who wishes to work is laudable, it neglects the serious difficulties in structuring suitable and rewarding work activities, arranging for the sale of products produced at a price that reflects neither charity nor the subsidization of purchaser, and the development of subsidy arrangements that encourage the maximization of the net social benefits of the program. Indeed, even if these obstacles are overcome, the social costs of publicly providing work to less productive workers are large and may remain substantially in excess of the benefits of such an arrangement.

A major component of the social cost is the forgone productivity of the participants in the program. This cost is positively related to the skill level of participating workers—which in turn is positively related to the wage level established for public employment. High-wage programs—by attracting workers with high forgone opportunity costs—are less likely to be efficient in benefit-cost terms than programs designed for those with poor opportunities for employment in the private sector. Moreover, revenue-yielding programs employing participants with high forgone opportunities are likely to displace private employment, which also threatens their benefit-cost efficiency, unless the productivity of participants is equally high in the public employment program.

If an expanded federal program of public employment is to be undertaken, attention should be focused on the arrangements for publicly subsidizing such activities. Program managers should be given incentives to reduce costs (especially staff and supervisory costs), increase worker productivity, and increase sales revenue. Likewise, if the program is to involve grants to state or local governments, the subsidy arrangement should seek to encourage activities that have high social value and that are net marginal additions to public sector output, to constrain staff and supervisory costs, and to maximize worker productivity. Such incentives could tie the size of public grants or increases in managers' salaries to

specified performance indicators. They would be particularly difficult to apply, however, in public programs producing nonmarketable outputs.

The transition of less productive workers from public employment programs with adapted work arrangements to regular public or private employment is not likely to be substantial, even when rehabilitation and training are part of the program. The transition is likely to be especially low when there is relatively high unemployment in the economy. The economic success of the program obviously depends in part on macroeconomic policies.

Public employment and income transfer programs for less productive workers should be carefully integrated to enable eligible individuals to increase their income through the employment program. They should also be structured to encourage participating workers to move into regular public or private employment. Thus transfer benefits should lie below the sum of transfer benefits plus earnings from public employment, which should, in turn, lie below potential earnings in regular public or private employment.

Appendix A: Calculation of Training and Increased Productivity Benefits

The calculation of the benefits from increased worker productivity due to training, familiarity with the work place or work schedules, and accommodation to production procedures is difficult. Ideally, a worker's gain in productivity would be estimated by observing his productivity *with* and *without* participation in the Social Employment program. An alternative method is to observe both a group of program participants and a matched group of similar individuals over a period after which the former group has completed the program. It is the gap in productivity—as reflected in earnings—between the two groups over time that represents the contribution of the program, and that must be counted as a benefit. However, because most participants in the Social Employment program remain in it, this observation method is not possible.

The procedure adopted here is more crude than either of these methods. It is based on the presumption that the movement of a worker from one of the ten wage groups in the Social Employment program to a higher group means that he has attained a higher skill level, a higher

competence, and, hence, greater productivity. The observed movement of a worker over time is taken to represent the contribution of the program to his skills and productivity. It is presumed also that the wage level in each group represents the value of the productivity of workers in that group. The correct measure of a worker's productivity would be what he could command in the open labor market, but there is no effective normal demand for Social Employment workers. However, the wage levels attached to the groups are likely to be good proxies of the upper-bound value of the productivity of workers in each group.

The change in a worker's productivity over time is indicated by how he changes wage groups over time. This presumes, of course, that the plant manager is able to evaluate accurately the productivity progress of a worker through time. Because there are no data on the progress of individual Social Employment workers through time, it is further assumed that a center that experiences very little growth or contraction in its size over time has the same group of workers from one period to the next. If that is the case, the change in the distribution of workers among the wage groups from one period to the next can be measured. This yields an estimate of the pattern of progress of workers through the wage groups through time. Observing this change between two years yields an estimate of the contribution of the program in the intervening year to the increased productivity of its work force.

Clearly the same group of workers is not employed in both periods. However, if centers with little growth or reduction in size can be identified, some of the problem caused by the interjection of new workers will be eliminated. The problem that remains is simply the substitution of new workers for those leaving. Such new workers may have higher skill levels than those leaving, or lower skill levels. On balance, however, one would expect the new entrants to have somewhat lower skill levels than those leaving. Hence, observation of the change in the distribution of workers in a center by wage group may yield an estimate of productivity growth that is biased downward to some unknown extent. However, because centers that have little change in size have been chosen, and because entering workers may well be placed in entering wage groups that are about the same as those of workers who leave, the bias is presumed not to be excessive.

To develop an estimate for 1973 a random sample of nineteen centers was chosen, and the distribution of workers by wage groups was obtained

for each center for 1973, 1974, and 1975. This yielded thirty-eight observations of year-to-year changes in the distribution of workers by wage groups. The wage levels of each group for December 1973 were presumed to represent the structure of productivity among the workers. All of those that demonstrated an increase or decrease in the number of workers of 10 percent or more were discarded. This left a total of thirty-one observed changes in the distribution.

For each of the thirty-one distributions, the average wage level (using the 1973 structure) was calculated. Then, the difference between the average wage levels of two consecutive years was calculated. This difference is an estimate of the average advancement in wage levels—taken to represent productivity—of the workers in a center. Twenty-six of these had positive values. (The five with negative differences were presumed to reflect an excessive inflow of new, lower productivity workers and they were discarded.) The range of the estimated average differences was from 1 guilder a year to 221 guilders a year. The weighted mean of these annual average increments (using the number of workers in the center as weights) was calculated as 69.96 guilders a year. Hence, a value of 70 guilders per year was accepted as the contribution of one year's operation of the program to the increase in productivity of the average worker.

The question now becomes, how long will this one-year increment persist? Most studies have indicated that there is a rather rapid decay over time in the earnings difference between workers who entered a training program and those who did not—that after ten years, nearly all of the increment to productivity had faded away. Here it is assumed, more optimistically, that the estimated annual increment to productivity—70 guilders a year—persists for each worker for fifteen years, and then falls to zero. That increase in productivity is a stream of benefits through time. It is therefore difficult to use in a benefit-cost analysis because a benefit received in some future year is not worth as much as the same benefit received today. Thus, the present value of the stream of benefits must be calculated by discounting (a compound-interest type calculation). The present value P of a stream of annual benefits R_i is calculated as

$$P = \sum \frac{R_i}{(1 + r)^i},$$

where the interest rate r is 10 percent. The present value of increased productivity benefits based on 1973 wage data is 531 guilders per worker.

Appendix B: Calculation of Costs of Displaced Private Sector Employment

By producing output and selling it in the open market, Social Employment centers are providing competition to private sector business. It seems reasonable to assume that, in the absence of induced price changes, every guilder of Social Employment sales represents equivalent sales that would, in the absence of the program, have been made by private business. Because of this reduction of private sector sales, some workers in the private sector will not have jobs that they otherwise would have had. In a fully employed economy, this is no problem—these workers will, by definition, be employed elsewhere in the economy. When there is general unemployment, these displaced workers may not find an alternative job. In this case, their productivity is lost to the economy. This is a social cost. If none of the displaced workers find alternative employment, the social cost is estimated by the wage income that would have been generated by the displaced workers.

As a first step in estimating this component of costs, the sales of the Social Employment industrial centers are used as an estimate of private sector sales forgone. Then, the number of displaced private sector workers implied by these forgone sales is estimated by calculating the weighted average sales per worker in the industries producing products sold by the Social Employment industrial centers, and then multiplying the inverse of this ratio by the forgone sales. The value of the wages forgone in the private sector because of this displacement was obtained by multiplying the estimated number of displaced workers by the weighted average wage costs per worker in the affected industries. The industry weights used were the following percentages of industrial center sales, by industry, in 1973: textiles and clothing, 7.0 percent; leather, plastic, rubber, and chemicals, 6.3 percent; wood and furniture, 10.7 percent; paper, printing, and editing, 7.8 percent; pottery, glass, and concrete, 0.8 percent; metal and metal products, 32.6 percent; other, 34.8 percent.[39] Sales per worker among the industries ranged from 134,000 guilders in the rubber and plastics industry to 63,000 guilders in the wood and furniture industry. The weighted average sales per worker is estimated at 74,058 guil-

39. The weighted average of the percentages calculated for the identified industries was assigned to the "other" industry category.

ders. The weighted average wage costs per worker in the affected industries—using the same weights—is 24,284 guilders.

In 1973, total sales revenue in the industrial centers program was 240 million guilders, implying that 3,240 private sector workers were displaced because of the Social Employment industrial centers programs.[40] Multiplying the weighted average wage costs per worker by the number of workers displaced (3,240) yields an estimate of the private sector productivity that would be forgone if *none* of the displaced workers finds alternative employment. This value is 78.7 million guilders. If the upper-bound estimate of the proportion of displaced private sector workers who do not find alternative employment is taken to be 0.3, the social costs attributable to the industrial centers program from this displacement effect is 23.6 million guilders, or 728 guilders per worker.

Comments by Victor Halberstadt

Bob Haveman's paper is about the real world. I like that because often discussions on topics like these do not give me the feeling that participants are sufficiently concerned about the realities of today and tomorrow. Too often the topics assigned—and maybe even the selection of participants—for conferences are slightly biased toward theorizing and testing the unreal. If this seems to be an unkind remark, it is in a sense meant to be so: I would like to provoke you to be explicit about some of your own value judgments about the social benefits and costs of direct creation of jobs, and then continue to face the big question for the next few years also on the basis of common sense. That question simply is whether and how to expand the public sector so as to be able to deal with the problem of the structurally unemployed. That can be done by either income transfer programs or by direct creation of jobs.

I am not advocating simply copying some of the programs aimed at solving this question as they have been implemented in the Netherlands, Germany, Sweden, and other countries. But I cannot escape the feeling that a bit more down-to-earth information and discussion about programs in some other countries would have resulted in a more balanced discus-

40. It should be noted that, in 1973, there were 32,714 workers employed in the industrial centers program. Hence, on average, 1 private sector worker is displaced for every 10 disabled workers employed.

sion in this conference. One then might have concluded that it is worthwhile to consider experimenting, demonstrating, theorizing, and evaluating a bit less, especially in view of the lack of facts and theory. The intellectual energy saved might be directed toward implementing some—not many—programs.

I believe that direct creation of jobs in or via the public sector is such a pressing issue that a follow-up conference with some cross-national studies is needed. It would be of value to Europe as well as the United States. Many of these concerns have been discussed in the past few years in the Organisation for Economic Co-operation and Development (OECD), in the European Economic Community (EEC), and elsewhere. Unfortunately, there has been little rigorous evaluation of European programs, and the few studies that have been completed are not cited in the footnotes to the elegant and intellectually impressive papers presented here. Greater attention to these international experiences would increase the relevance of conferences of this kind.

The Haveman paper, I think, is a very good one. It is based on a study done while the author was in Holland, and it is the first thorough review of an important social program in Holland. I have very few remarks of a critical nature to make since the crucial points are all there: a discussion of program design, conceptual framework, incentives faced by program operators, and trade-offs that exist among various goals. I would like to make some indirectly related remarks about the paper, raise some larger issues, and give you some background on developments in the Dutch economy relevant to some of the issues raised by Haveman.

I have some difficulty with the concept used by Haveman of *less productive workers,* spelled out in detail in footnote 1. Certainly low economic productivity is a characteristic of the handicapped, disabled, and disadvantaged, but I am dubious for the purpose of policy analysis and program creation that this should be considered the main characteristic. Elsewhere in the economy, low economic productivity is also widespread, sometimes subsidized, and certainly growing. In Holland this goes for many of the "soft" sectors in the economy such as health and education. My question to Haveman really is, why does he need this concept? He knows as well as I do that the Dutch Social Employment program is largely a comfortable shelter for those who are actually disadvantaged but also, and not to a negligible degree, for rather normal workers.

In the introduction to his paper, Haveman states that the social welfare states of Western Europe (for example, Sweden and the Netherland-

generally take the "right to work" as a fundamental principle and "seek to provide employment for anyone who wishes to work." Now, I do not want to judge Sweden, but as far as the Netherlands is concerned, I believe I should be honest with you. Whatever we may say in public, good Calvinists as we all are, we in fact have already given up the goal of providing employment for anyone who wishes to work. Rather we in effect have emphasized increasing income support programs—as have you in the United States.

The most relevant part of the Haveman paper for this conference seems to me to be the discussion of adverse incentives and a lack of economic control. That is a rather harsh conclusion about one of Holland's most cherished social programs, but it is accurate. It is intriguing that it had to be an American economist who did this job in Holland. Interestingly, Dutch economists rather prefer not to analyze social programs. I would guess that the same results are applicable to many other social programs—whether directed at increasing incomes or at job creation—in Holland and elsewhere in Europe. That is, they are plagued by adverse incentives and lack of economic control but, nevertheless, largely supported from the reasonable left to the reasonable right on the political scene. The social benefits therefore seem to be huge, offsetting the direct costs. No wonder that redistribution of income has been very effective in countries such as Holland, Sweden, and Germany.

Tables 4 and 5 provide some basic data on developments in the Dutch economy relating to social policies involving direct creation of jobs and

Table 4. Working Population as a Percentage of Total Population, Selected Countries, 1953, 1963, and 1973

Country	*1953*	*1963*	*1973*
Belgium	41.2	40.1	41.1
France	45.3[a]	42.0	42.1
Italy	39.3[a]	40.8	35.9
Japan	46.0	48.5	48.9
Netherlands	38.4	37.0	35.6
United Kingdom	47.0	47.8	45.7
United States	42.2	39.4	43.3
West Germany	47.0	46.9	43.5

Sources: Organisation for Economic Co-operation and Development, *Manpower Statistics, 1950–1960* (Paris: OECD, 1961), and *1950–62* (1963); and OECD, *Labour Force Statistics, 1962–1973* (Paris: OECD, 1975).

a. Figure for 1954.

Table 5. Rough Estimate of Number of [illegible]nts of Income Transfers in the Working Population of the Netherlands, 1[illegible]

Type of transfer	*Number of recipients*
Sickness benefits (10 percent annual average, only employed are covered)	400,000
Unemployment benefits	220,000
Social assistance (as only source of income)	100,000
Public work programs (temporary)	30,000
Social Employment program	65,000
Disability benefits for employed[b]	400,000
Disability benefits for self-employed and handicapped[b]	100,000
Total	1,315,000
Addendum	
Working population 15–65 years old[c]	4,700,000

Source: Author's computations.

a. Figures are averages for 1976 and 1977. Because the law changed on Oct. 1, 1976, data cannot easily be broken down for 1976 and 1977. Figures do not take into account transfers (disability benefits only) to the 600,000 civil servants in the working population.

b. Recipients of disability benefits generally do not work.

c. The working population declined from 60 percent of total population between 15 and 65 years old in 1960, to 57 percent in 1970, to 51 percent in 1976.

other policies targeted on less productive workers. These do not provide a complete picture, but they serve as a useful framework for understanding what is happening in Holland and some other countries.

As table 4 shows, the working population was a low percentage of total population in the Netherlands in 1973; again Calvinism perhaps. Most women, it seems, still stay in the home cooking and raising children full time, though some very recent forecasts suggest a dramatic change toward greater participation of women in the labor force in the next few years, perhaps partly because of the social programs available to workers only.

I find the number of beneficiaries of income transfers in the working age population in Holland (shown in table 5) quite remarkable. The numbers of recipients of disability benefits are astoundingly high—equivalent to more than 10 percent of the actively working population. In general the Dutch—whether economists or not—do not get very excited about them. Why this is so is discussed later.

Estimates over a decade of the number of workers receiving disability benefits are shown in table 6; those are workers no longer contributing to economic production. The growth rate of beneficiaries of disability benefits is slightly astonishing. To a large extent this is nothing more

Table 6. Number of Recipients of Disability Benefits in the Netherlands, 1968–77

Year	*Number of recipients*
1968	164,000
1969	194,000
1970	215,000
1971	237,000
1972	261,000
1973	287,000
1974	313,000
1975	345,000
1976–77	530,000[a]

Sources: Centraal Bureau voor de Statistiek, *Statistisch Zakboek, 1977*, and preceding issues; and for 1976–77, author's estimates. Figures are rounded.

a. Average for 1976 and 1977. Includes 70,000 self-employed workers and about 30,000 early-handicapped workers who came under the law in October 1976.

than an expensive way of providing unemployment benefits and of retiring people at an early age—over half of all male workers, for instance, become beneficiaries of disability or similar programs after the age of fifty-seven.

Why has all of this happened and what are its consequences? The macroeconomic effects are apparent in tables 7 and 8. In a sense these effects were expected, or put differently, they reflect the social goals set in economic policy over the last ten years. The redistribution of disposable income is huge, as is readily evident. The result is that the profit rate has deteriorated seriously in the ten-year period. I expect this to change only slightly for the better. Therefore the overall conclusion cannot be escaped that there is little incentive for creating jobs in the private sector. That is a fairly serious development, not unknown elsewhere in

Table 7. Percentage Distribution of Disposable Net National Income in the Netherlands, Selected Years, 1969–77

Source	*1969*	*1971*	*1973*	*1975*	*1976*	*1977*
Labor	44.9	44.4	41.5	44.2	41.9	40.9
Transfers	18.7	20.3	21.4	26.0	26.1	26.6
Public sector	22.2	24.2	24.0	23.6	23.2	22.6
Capital[a]	8.9	5.2	7.1	−1.7	1.2	2.5
Life insurance companies and pension funds[b]	5.2	5.8	6.0	7.9	7.6	7.5

Sources: De Nederlandsche Bank n.v., *Report for the Year 1976*, Statistical Annex, table 10.1; and for 1977, data supplied by De Nederlandsche Bank. Figures are rounded.

a. Profits, dividends, rent, etc., received by persons and businesses.

b. Income received by these organizations.

Table 8. Percentage Changes in Disposable Income in the Netherlands, Selected Years, 1967–76

Source	*1967*	*1969*	*1971*	*1973*	*1975*	*1976*
Labor	6.5	14.5	10.5	11.5	12.0	8.5
Transfers	14.0	16.0	19.0	16.5	21.5	15.0
Capital[a]	24.5	14.5	−9.0	42.5	[b]	[b]
Life insurance companies and pension funds[c]	13.5	14.5	17.5	16.5	26.5	11.0
Public sector	8.0	9.0	15.5	15.0	4.0	12.5
Net national income	10.0	13.5	12.5	15.5	7.5	14.5

Sources: Same as table 7.
a. Profits, dividends, rent, etc., received by persons and businesses.
b. Not calculable because disposable income from capital in 1975 was a negative amount.
c. Income received by these organizations.

Europe. In effect, only the public sector has shown a net creation of jobs—about 3 percent per year—over the last fifteen years. Private industry has not done so.

Of what relevance is this discussion for the United States? Bob Haveman draws some conclusions for the current U.S. discussion about less productive workers based on the Dutch Social Employment program. I find this the least convincing part of his otherwise excellent paper.

I do not think that creating employment for low productivity workers can be looked at separately from job creation in general for all the structurally unemployed. We have made that mistake in the Netherlands so far, and I hope that you will not do so.

Whatever kinds of programs are designed, there is little doubt that the management arrangements are crucial and that the programs should be controlled at the national level. They are not in the Netherlands and the disastrous results for the economy are partly evident in Haveman's analysis.

Finally, it is highly doubtful whether one is on the right course if one rules out a much shorter working week and early retirement in the future; however, this should be accompanied by a more or less corresponding drop in disposable income. Whether high or low productivity workers are the focus here does not really matter. I think—and there is some European evidence supporting my view—that many problems, such as adverse incentives, can be prevented if this option—with some government subsidy, of course—is not totally ruled out in favor of massive job creation programs or income maintenance.[41]

41. For further comments on the Haveman paper, see comments by Stromsdorfer following the Kemper-Moss paper.

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